PERSISTENT MARITIME UNMANNED AIRCRAFT SYSTEMS | PMA-262

Fact Sheet

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BROAD AREA MARITIME SURVEILLANCE—DEMONSTRATOR

Based on the outstanding success of the Global Hawk Maritime Demonstration program, the Navy's unmanned RQ-4A Global Hawk system was selected to deploy overseas and is now serving the Warfighter as the Broad Area Maritime Surveillance—Demonstrator (BAMS-D).

Description

The Navy's RQ-4A Global Hawk air vehicle can soar nearly 11 miles above the ground or up to 60,000 feet. The high-flying aerial vehicle can fly persistently for approximately 30 hours above most weather. Imagery and other data obtained by the aircraft feeds by satellite into the Navy ground segment consisting of a mission control element, a launch and recovery element, and a Navy-designed Tactical Auxiliary Ground Station (TAGS). Flown by Navy and Navy contractor pilots, the asset is controlled from Naval Air Station (NAS) Patuxent River, Md.

Background

Naval Air Systems Command's (NAVAIR) Navy & Marine Corps Unmanned Air Systems (PMA-263) originally acquired the Global Hawk Maritime Demonstration (GHMD) program for the development of Navy doctrine and concepts of operations for large persistent unmanned air vehicles. Currently, the system is sustained by the Persistent Maritime Unmanned Aircraft Systems (PMA-262) program office and has been renamed the Broad Area Maritime Surveillance—Demonstrator (BAMS-D). To date, the BAMS-D team has utilized the RQ-4A long endurance air vehicle to refine tactics, techniques and procedures for use in a maritime environment.

Overview

BAMS-D successfully completed its first Navy split-site deployment in support of Trident Warrior '08 and RIMPAC exercises. An aircraft, shelter and personnel were located in Pt. Mugu, Calif., while mission command, control and execution remained at Patuxent River, Md.

BAMS-D supported real-world operations under U.S. Northern Command, providing reconnaissance of wildfires in the rugged coastal mountains of California. Later tasking placed BAMS-D along the U.S. Gulf Coast to assess the damage left by Hurricane Ike. Despite challenging weather conditions remaining after the storm, BAMS-D sensor imagery aided first responders in Louisiana and Texas to most efficiently deploy their resources in the massive relief effort.

BAMS-D was used to develop methods for integrating the Automatic Identification System (AIS) into Fleet operations. Experimentation using BAMS-D also benefitted the Naval Sea Systems Command Ocean Surveillance Initiative and Oceanographer of the Navy office activities assessing usefulness of long-endurance, high-altitude unmanned systems in collecting Fleet-relevant meteorological data.

Beginning in mid-December 2008, in response to a Secretary of Defense Deployment Order, BAMS-D dispatched a portion of its system in support of the Warfighter as part of an active Navy maritime patrol unit. Over the course of eight months, BAMS-D flew over 800 combat hours in support of the U.S. Fifth Fleet. During that time, BAMS-D has continued to collect lessons learned for BAMS UAS and the Navy ISR Family of Systems in an operational arena—while maintaining the capability for experimentation and demonstration at NAS Patuxent River.

Program Status

The Navy's RQ-4A BAMS-D is currently directed by Commander, Patrol and Reconnaissance Wing 2. The BAMS-D team continues to support Fleet operational requirements in theater while concurrently providing training and testing capabilities at Patuxent River, Md.

Media Point of Contact
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Specifications

Primary Function: Specifically tailored for maritime and littoral intelligence, surveillance and reconnaissance missions. The BAMS-D system currently consists of two Block 10 RQ-4A air vehicles, one Mission Control Element (MCE), two Launch and Recovery Elements (LRE) plus one Tactical Auxiliary Ground Station (TAGS).

Contractor: Northrop Grumman

Date Deployed: January 2009

Propulsion: 1 Rolls-Royce AE3007H turbofan

Endurance: 31 hours (with reserves)

Airspeed: 340 knots (approximately 391 mph)

Range: 10,500 nautical miles (19,446 kilometers)

Crew: 4 per ground station (2 pilots and 2 sensor operators)

Sensors: Automatic Identification System (AIS) receiver, Electronic Support Measures (ESM) and the following side-looking sensors: Electro-Optical/Infrared (EO/IR) camera, maritime-enabled Synthetic Aperture Radar (SAR) and Inverse Synthetic A Radar (ISAR)

Ceiling: 60,000 feet (18,288 meters)

Length: 44.0 feet (13.4 meters)

Wingspan: 116 feet (35.4 meters)

Height: 15.2 feet (4.6 meters)

Weight: Max design gross take-off: 25,600 pounds (11,612 kilograms)